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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,567	12/12/2001	Hidemichi Fujiwara	KAWAW19.001AUS	9280

20995 7590 12/17/2003

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EXAMINER

NGUYEN, CHAU N

ART UNIT PAPER NUMBER

2831

DATE MAILED: 12/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/021,567

Applicant(s)

FUJIWARA, HIDEMICHI

Examiner

Chau N Nguyen

Art Unit

2831

AN

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-14 is/are allowed.
- 6) ☒ Claim(s) 15-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- ☐ Interview Summary (PTO-413) Paper No(s). _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 17 and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification, as originally filed, does not provide support for the claimed subject matter of "a total amount of Be, Sr, Mg, Ti and V: 0.003 to 0.05 wt%" as claimed in claim 17. Specifically, the recitation of " Be, Sr, Mg, Ti and V" implies that "*Be and Sr and Mg and Ti and V*" altogether. There is no disclosure to support such claimed subject matter. Regarding claim 19, again there is no disclosure to support the amount of Cu in the alloy being "**over**" 0.05 wt% .

Due to this rejection, claim 17 has not been considered over the prior art, and the amount of Cu is assumed to be 0.05 to 0.4 wt%.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 15, 23, 24, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (6,239,373) in view of JP7-207392 (JP'392).

Sato et al. discloses a cable comprising a stranded wire (16) formed of a plurality of strands, at least one insulation layer (17) covering the stranded wire, and at least one shield (18) formed of a braid.

Sato et al. does not disclose each of the strands consisting essentially of Zr: 0.05 to 0.4%, Fe: 0.05 to 0.2%, Si: 0.05 to 0.2%, a total amount of at least one kind selected from a first group consisting of Mg and Ti, and at least one kind selected from a second group consisting of Be, Sr, V: 0.003 to 0.05 wt% and balance being Al and inevitable impurities, nor the braid containing more than 99 wt.% of Al.

JP'392 discloses a heat resistant aluminum alloy for conductor, wherein the alloy consists essentially of Zr: 0.05 to 0.4%, Fe: 0.05 to 0.2%, Si: 0.05 to 0.2%,

a total amount of Sr and Ti : 0.01 wt% and the balance being Al and inevitable impurities. It would have been obvious to one skilled in the art to use the Al alloy as taught by JP'392 for the conductive strands of Sato et al. since the alloy of JP'392 is a heat resistant alloy. Although not specifically disclosed by Sato et al, it would have been obvious to one skilled in the art to use pure aluminum, with more than 99wt.% of Al, for the braid of Sato et al. since pure aluminum is well-known in the art for its highly electric conductivity. Noted that the modified cable of Sato et al. can be used as an automobile power cable since it comprises structure and material as claimed.

Re claims 23 and 24, Sato et al. also discloses the insulation layer and the shield layer, each comprising a single layer, the stranded wire being orderly covered by the insulation layer and the shield layer, the at least one insulation layer comprising two layers of first and second insulation layer while the shield layer comprising a single layer, and the stranded wire being orderly covered by the first insulation layer, the shield layer and the second insulation layer. Re claims 26 and 27, it would have been obvious to one skilled in the art to use flame-resistant polyolefin resin for the insulation layer of Sato et al. to provide the cable with flame resistance properties since flame-resistant polyolefin resin is well-known in the art for being used as cable insulation.

5. Claims 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. in view of Fortin et al. (4,121,951).

Sato et al. discloses a cable comprising a stranded wire (16) formed of a plurality of strands, at least one insulation layer (17) covering the stranded wire, and at least one shield (18) formed of a braid.

Sato et al. does not disclose each of the strands consisting essentially of Zr: 0.05 to 0.4 wt%, Fe: 0.05 to 0.2 wt%, Si: 0.05 to 0.2 wt%, V: 0.003 wt%, and balance being Al and inevitable impurities, nor the braid containing more than 99 wt.% of Al.

Fortin et al. discloses an aluminum alloy conductor consisting essentially of Zr: 0.05 to 0.4 wt%, Fe: 0.05 to 0.2 wt%, Si: 0.05 to 0.2 wt%, and V: 0.005 wt% or V and Ti: 0.01 wt% (re claim 20) and balance being Al and inevitable impurities (col. 10, lines 39-63). It would have been obvious to one skilled in the art to use the aluminum alloy taught by Fortin et al. for the conductive strands of Sato et al. since the alloy taught by Fortin et al. has a superior creep resistance while satisfying the widely required minimum value of conductivity. Although not specifically disclosed by Sato et al, it would have been obvious to one skilled in the art to use pure aluminum, with more than 99wt.% of Al, for the braid of Sato et

al. since pure aluminum is well-known in the art for its highly electric conductivity. Noted that the modified cable of Sato et al. can be used as an automobile power cable since it comprises structure and material as claimed.

6. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. in view of Matsuoka et al. (2003/0143102).

Sato et al. discloses a cable comprising a stranded wire (16) formed of a plurality of strands, at least one insulation layer (17) covering the stranded wire, and at least one shield (18) formed of a braid.

Sato et al. does not disclose each of the strands consisting essentially of Zr: 0.03 to 0.4 wt%, Fe: 0.2 to 0.7 wt%, Si: 0.2 to 0.6 wt%, Mg: 0.35 to 1.2 wt%, Cu: 0.05 to 0.4 wt%, and balance being Al and inevitable impurities, nor the braid containing more than 99 wt.% of Al.

Matsuoka et al. discloses an aluminum alloy consisting essentially of Zr: 0.03 to 0.4 wt%, Fe: 0.2 to 0.7 wt%, Si: 0.2 to 0.6 wt%, Mg: 0.35 to 1.2 wt%, Cu: 0.05 to 0.4 wt%, and balance being Al and inevitable impurities ([0016]). It would have been obvious to one skilled in the art to use the aluminum alloy as taught by Matsuoka et al. for the conductive strands of Sato et al. since the alloy taught by Matsuoka et al. is capable of suppressing abrasion. Although not

specifically disclosed by Sato et al, it would have been obvious to one skilled in the art to use pure aluminum, with more than 99wt.% of Al, for the braid of Sato et al. since pure aluminum is well-known in the art for its highly electric conductivity. Noted that the modified cable of Sato et al. can be used as an automobile power cable since it comprises structure and material as claimed.

7. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. in view of JP'392 as applied to claim 15 above, and further in view of Suzuki et al. (5,532,910).

Claim 21 additionally recites each Al alloy strand being coated on its outer surface with a Ni layer. Suzuki et al. discloses an invention relating to a lead-bonding wire. Suzuki et al. discloses that nickel is known for being used to coat a lead for corrosion prevention (col. 1, lines 24-26). It would have been obvious to one skilled in the art to coat each aluminum alloy strand of Sato et al. with a nickel layer for corrosion prevention as taught by Suzuki et al.

8. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. in view of Matsuoka et al. as applied to claim 19 above, and further in view of Suzuki et al.

Claim 22 additionally recites each Al alloy strand being coated on its outer surface with a Ni layer. Suzuki et al. discloses an invention relating to a lead-bonding wire. Suzuki et al. discloses that nickel is known for being used to coat a lead for corrosion prevention (col. 1, lines 24-26). It would have been obvious to one skilled in the art to coat each aluminum alloy strand of Sato et al. with a nickel layer for corrosion prevention as taught by Suzuki et al.

9. Claims 25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. in view of JP'392 as applied to claim 15 above, and further in view of Nixon (4,408,089).

Nixon discloses a cable comprising at least one insulation layer comprising first, second and third insulation layer and at least one shield layer comprising two shield layers, wherein the central conductor is orderly covered by the first insulation layer, the first shield layer, the second insulation layer, the second shield layer, and the third insulation layer. It would have been obvious to one skilled in the art to additionally provide the cable of Sato with a second shield layer and a third insulation layer as taught by Nixon so that the modified cable of Sato et al. can be used in a relatively high frequency range (re claim 25). Re claim 28, it would have been obvious to one skilled in the art to use flame-resistant polyolefin

resin for the insulation layer of Sato et al. to provide the cable with flame resistance properties since flame-resistant polyolefin resin is well-known in the art for being used as cable insulation.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 16 and 18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S.

Patent No. 6,573,454 (Fujiwara) in view of Fortin et al.

Claim 1 of Fujiwara discloses the invention substantially as claimed except for V or Ti and V being selected to be included in the alloy. Fortin et al. discloses an aluminum alloy in which Ti and V are included in the alloy. It would have been

obvious to one skilled in the art to include Ti and V in the aluminum alloy of Fujiwara to provide the alloy with a superior creep resistance as taught by Fortin et al.

Response to Arguments

12. Applicant's arguments with respect to claims 15 and 17-19 have been considered but are moot in view of the new ground(s) of rejection.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N Nguyen whose telephone number is 308-0693. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (703) 308 3682. The fax phone number for the organization where this application or proceeding is assigned is (703) 305 3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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A handwritten signature in black ink, appearing to read 'Chau N Nguyen', with a stylized, cursive script.

Chau N Nguyen
Primary Examiner
Art Unit 2831